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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/630,955 | 07/30/2003 | Ankur Varma | MS1-1485US | 1789 |
| 22801 | 7590 | 08/13/2008 | EXAMINER | |
| LEE & HAYES PLLC | | | VO, TUNG T | |
| 421 W RIVERSIDE AVENUE SUITE 500 | | | ART UNIT | PAPER NUMBER |
| SPOKANE, WA 99201 | | | 2621 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 08/13/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/630,955 | VARMA, ANKUR | |
| | Examiner | Art Unit | |
| | Tung Vo | 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05/30/2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23-29 is/are pending in the application.
 4a) Of the above claim(s) 1-22 and 30-51 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 23-29 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 20 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 23-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Mancuso et al. (US 6,600,839).

Re claim 23, Mancuso discloses a noise reduction engine (fig. 1), comprising:

a buffer for storing pixel values (102 of fig. 1, see also fig. 2);

a matrix selector (104 of fig. 1, figs. 3-5) for selecting dimensions of matrices (fig. 3) for arranging the pixel values to represent regions of an image residue (encoded image as encoded macroblock; col. 1, lines 61-63); and

a diffusion engine (110 of fig. 1, figs 6-11) for reducing the magnitude of at least some of the pixel values (604 of fig. 7, Min, 718 of fig. 7; see also fig. 10) and for reducing variability in the difference between adjacent pixel values in a subject matrix by diffusing magnitudes of pixel values into each other (702, 706L, and 706R of fig. 7, fig. 10), the diffusion engine configured to apply a reverse diffusion function to restore the pixel values from the at least some of the pixel values (610 and 606 of fig. 6, see also figs. 9 and 11).

Re claim 24, Mancuso further discloses further comprising an anchor value selector (705L and 705R of fig. 7; retrieving pixels) associated with the diffusion engine to select one of the pixel values in a given matrix as an unchanging diffusion boundary value for a diffusion process to be applied to pixel values in the matrix (figs. 4 and 5).

Re claim 25, Mancuso further discloses further comprising an entropy calculator (706R and 706L, and 707 of fig. 7) associated with the anchor value selector to select an anchor value based on an entropy value of one or more of the pixel values.

Re claim 26, Mancuso further discloses a scan pattern engine to apply the reversible diffusion function to a matrix of pixel values in an order (602 of fig. 6).

Re claim 27, Mancuso further discloses an iteration manager (114 of fig. 1) to control an amount of diffusion to be applied to a matrix of pixel values by controlling a number of times that the reversible diffusion function is applied.

Re claim 28, Mancuso further discloses a store of reversible diffusion functions (102 of fig. 1, storing encoded inter or intra macroblock) suitable for different image residues.

Re claim 29, Mancuso further discloses a reverse diffusion module to apply reverse diffusion using an anchor value (710 of fig. 7).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tung Vo/
Primary Examiner, Art Unit 2621